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Lawyer's guide to the consumer price index ...

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A LAWYER'S GUIDE TO THE CONSUMER PRICE INDEX

How to Adjust for Inflation in CHILD SUPPORT and CONTRACT FOR SERVICES Agreements

Canada

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How to Adjust for Inflation in CHILD SUPPORT and CONTRACT FOR SERVICES Agreements

BACKGROUND

As prices change, the value of goods and services that can be bought with a fixed amount of money also changes. Rising prices are associated with declining purchasing power of money and, conversely, falling prices are associated with increasing purchasing power. In order to maintain the purchasing power in times of changing prices, a general indicator of the rate of price change is needed which could be used to adjust incomes, wages, or other money payments. In Canada, the indicator most often used is the Consumer Price Index (CPI). The CPI simply stated is a measure of the change in the cost, over time, of a constant "basket" of goods and services representative of those purchased by the average urban Canadian household.

The Consumer Price Index measures changes in prices over specified time periods, not differences in the actual level of prices. The cost of the CPI basket is assigned a value of 100 in the base period - currently 1981=100 - and the cost at other points in time is expressed as a percentage of that base period. For example, the index level for 1983 was 117.2. This means that the cost of the basket increased by 17.2% between the base period (1981) and 1983. While the index reflects the movement in prices from the base period, it is also possible to measure percentage changes between any two specified periods of time.

WHO IS COVERED?

The CPI relates to all families and individuals living in Canadian urban centres with populations of 30,000 or more. As it includes both homeowners and renters, young and old, rich and poor, it can be considered as being representative of the "average" Canadian urban household. As it is an average, it may not be entirely applicable to any one individual or family since individual's expenditure patterns differ significantly. However, studies show that the CPI is quite reflective of most broad socio-economic groups within the population.

HOW IS THE INDEX CONSTRUCTED?

The CPI relates to price changes associated with a certain "basket" of goods and services. Information on the composition of this basket is obtained from periodic Family Expenditure Surveys. These surveys collect information on the spending habits of the average urban Canadian family. These surveys determine not only what is to be included in the CPI "basket" but also the relative importance or "weight" of each of the items included in the basket. These weights will determine what impact the individual price changes will have on the overall CPI.

Goods and services having a market price which can be associated with an identifiable quantity and quality are included in the basket. In this context, it should be noted that the CPI is primarily restricted to after-tax expenditures. No attempt is made to distinguish between "luxuries" and "necessities" and nothing is deleted on the basis of moral or social judgment. From time to time, it is necessary to change the weights used in the calculation of the Index to adjust for changes in spending patterns in order to ensure that the Index remains relevant. The expenditure weights are presently updated once every four years.

Prices are collected for various items representative of the goods and services included in the basket. The prices are taken from a wide variety of outlets - supermarkets, department stores, specialty stores, etc. - wherever Canadian consumers shop. They reflect the final retail selling price to the consumer, whether regular or special and include sales taxes.

As the price collection activities occur throughout each month, the Index cannot be associated with any one date in the month but rather to the month as a whole. For example, there is no index for January 1st but rather for the month of January.

INFORMATION PUBLISHED

Individual All-items CPIs are published for Canada and for 15 cities - St. John's, Charlottetown/Summerside, Halifax, Saint John, Québec, Montréal, Ottawa, Toronto, Thunder Bay, Winnipeg, Regina, Saskatoon, Edmonton, Calgary and Vancouver. Indexes are also available for major components and for many subcomponents. Monthly indexes are available approximately 20 days after the month in question and annual average indexes are included in the December publication. A schedule of the release dates for the upcoming year is published with the release of the November CPI. It should be noted that the indexes are not revised once published.

THINGS TO CONSIDER

If the CPI for Canada or any of the 15 cities are to be used for indexation or escalation purposes, certain points must be kept in mind:

(1) Choosing the appropriate geographic index. You may use either the Canada index or one of the specific city indexes. The Canada index is most useful for national contracts while the individual city indexes better reflect regional price changes.

(2) Choosing the All-items index versus a components index. The All-items index is most representative of overall family expenditure and, as a result, is used in many agreements. However, if a contract deals specifically with one particular component (i.e. rent), then the relevant component index would be more appropriate.

(3) Understanding the base period. Presently, the base period is 1981=100. This base period is revised once every ten years. With each new time base change Statistics Canada converts the indexes of previous years to express them in terms of the new base period. Conversely, Statistics Canada will continue to provide indexes using previous base periods when requested.

(4) The expenditure weights used in the CPI must <u>not</u> be specified. As stated earlier, these expenditure weights are updated once every four years. Once a new expenditure pattern is introduced, the "old" patterns are no longer used on a current basis.

(5) The time period to which the contract relates and the frequency and timing of adjustments are to be specified. The contract must specify the beginning date for adjustment and the frequency (monthly, quarterly, annually) of the adjustments. The dates the adjustments are to take effect should also be specified. These dates could be following the release of a specific month's index or on a specific date using the most current month's index available at that time. If one wishes to calculate an increase over a 12-month period, it is to be calculated using the index values for the same month in succeeding years: for example, from December to December. Similarly, if the adjustments are to be semi-annual, illustrative periods would be December to June and June to December.

It should be noted that year-over-year adjustments based on single month indexes (i.e. December - December) may be influenced by irregular monthly movement. For example, a one-month gas price war could serve to deflate the change in the index in one particular month. If this occurred in the month being used for the year-over-year adjustment it could provide a distorted picture of the year as a whole which would not be corrected until the next period of adjustment. For this reason more frequent periods of adjustment would be better. By increasing the frequency of adjustment or by using annual averages the impact of irregularities can be minimized.

(6) If the adjustments are to be "folded-in" the base period settlement, this should be specified. "Folding-in" is a term used in contracts to indicate that as each adjustment is made a new amount is determined on which to base the next adjustment. This reflects a cumulative increase from one adjustment period to the next and avoids having the percentage change applied to the original contract amount each time. Without a "fold-in" clause, the financial compounding effect could be lost. (See example #A.)

(7) The type of adjustment is to be stated. The changes in the indexes can be expressed as either percentage changes or index point changes. Percentage changes are preferable, however, as index point changes introduce distortions especially when the index values become large relative to the base year. As well, a change in the base year would affect the point values. In the following table the Canada All-items Consumer Price Index for the period 1979 to 1983 is expressed on both a 1971=100 and 1981=100 time base.

All-items Consumer Price Index for Canada

	1971=100			1981=100		
	Index	Point Change	Percent Change	Index	Point Change	Percent Change
1979	191.2			80.7		
1980	210.6	19.4	10.2	88.9	8.2	10.2
1981	236.9	26.3	12.5	100.0	11.1	12.5
1982	262.5	25.6	10.8	110.8	10.8	10.8
1983	277.7	15.2	5.8	117.2	6.4	5.8

Although the index point changes differ substantially between the two time bases, the percentage changes are identical.

(8) The Consumer Price Index reflects both falling and rising price movements. Contracts should make provision for both negative and positive changes.

(9) To calculate a percentage change, the following formula should be used:

$$\frac{\text{Current Period Index} - \text{Previous Period Index}}{\text{Previous Period Index}} \times 100$$

Calculating the percentage change between 1982 and 1983, using the 1981=100 All-items as specified in the table above, results in:

$$\frac{117.2 - 110.8}{110.8} \times 100 = 5.776\%$$

which rounded to one decimal point becomes 5.8%.

As the indexes are only provided to one decimal place, the percentage changes can only be presented to one decimal place.

SAMPLE CASES

A) Jane Smith and her daughter Jill live in Saint John, New Brunswick. Following her divorce, Jane Smith discussed with her lawyer provisions to be incorporated into a child support agreement affecting her daughter Jill Smith. A decision had to be made as to the most appropriate way of protecting the $200 per month child support from inflation over the years. They decided to include an escalation clause based on the All-items Consumer Price Index for Saint John and to "fold in" the increases. The base year was 1981=100 and adjustments were to be made semi-annually.

The adjustment dates chosen were July 1 and January 1. The latest indexes available at those dates are May and November, respectively. The contract was to commence January 1, 1982.

Since the adjustment periods in this case are six months rather than month to month or year to year, the percentage change should be calculated using the formula indicated below. The percentage change for such a period would not be available in published tables. The first adjustment date would be July 1, 1982. To calculate the percentage change:

$$\frac{\text{Current Period Index} - \text{Previous Period Index}}{\text{Previous Period Index}} \times 100$$

$$\text{e.g. } \frac{\text{May 1982 CPI} - \text{Nov. 1981 CPI}}{\text{Nov. 1981 CPI}} \times 100 = \frac{108.9 - 104.3}{104.3} \times 100 = 4.4\%$$

Effective July 1, 1982 the monthly support rate would increase by 4.4% of the previous amount.

$$\$200.00 + (4.4\% \times \$200) = \$200 + \$8.80 = \$208.80$$

The new rate for the next six months would be $208.80.

On January 1, 1983 the next adjustment would be made. As can be seen in the following table, the percentage change from May 1982 to November 1982 is calculated to be 3%. This means the new rate would be 3% higher than the previous period.

$$\$208.80 + (3\% \times \$208.80) = \$208.80 + \$6.26 = \$215.06$$

The following table shows a continuation of this process.

Saint John Consumer Price Index (1981=100)

	All-Items CPI	% Change Over Previous Period	Monthly Payment
Nov. 1981	104.3		200.00
May 1982	108.9	4.4	208.80
Nov. 1982	112.2	3.0	215.06
May 1983	117.0	4.3	224.31

B) In 1983, when John Doe negotiated a 2 year contract in Vancouver to do a special research project he requested a COLA (Cost of Living Adjustment) clause to protect himself against inflation. It was agreed that his salary of $2,500 per month would be updated annually using the most current data available in the Vancouver All-items Consumer Price Index (1981=100). The adjustment date selected was March 31, 1984. The latest index available for that date is the February index. The contract commenced March 31, 1983.

The February 1984 issue of the monthly CPI publication provides information showing the Vancouver All-items Consumer Price Index for May of the current year, May of the previous year, and the percentage change between these two time periods.

The following table summarizes the CPI information used to update John Doe's contract and indicates the increases in his monthly rate.

Vancouver Consumer Price Index (1981=100)

	All-Items CPI	% Change Over Previous Period	Monthly Payment
Feb. 1983	114.2		2,500.00
Feb. 1984	119.7	4.8	2,620.00

Effective March 31, 1984 the monthly salary rate would increase 4.8% of the original amount. This would be an increase of $120.00 ($2,500 X 4.8%).

John Doe's adjusted salary in effect as of March 31, 1984 would be $2,620.00.

OTHER USEFUL INDEXES

The Consumer Price Index is the most widely used index for writing contracts which aim to protect family purchasing power. For other legal contracts, many other price indexes are available from Statistics Canada. These include indexes for commercial, industrial, construction and labour purposes.

A CHECKLIST FOR YOUR CONTRACT CLAUSE

Specifying the factors affecting the contract escalation clause will avoid the confusion and unnecessary renegotiation of the contract over minor items. A checklist of the factors follows:

___1. Identify the index e.g. CPI

___2. Identify the geography of the CPI to be used: Canada or a regional city

___3. Identify the specific index: All-items or one or more components

___4. Identify the base year e.g. 1981=100

___5. Identify the index to be used at the commencement of the contract (e.g. May 1981)

___6. Detail the period of adjustment (e.g. semi-annually) and period for which calculation is to be based (e.g. May to Nov. and Nov. to May)

___7. Detail the method of calculating the percentage change

___8. Make provisions for any future changes in methodology or presentation introduced by Statistics Canada

WHERE IS INFORMATION AVAILABLE

1) Call or visit a Statistics Canada Office in one of the following locations: St. John's, Halifax, Montreal, Toronto, Ottawa, Sturgeon Falls, Winnipeg, Regina, Edmonton or Vancouver. Toll-free service is available from anywhere in Canada to your nearest Regional Office. Please check your local directory for listings.

2) Contact Consumer Prices Section, Prices Division, Statistics Canada, Ottawa, Ontario K1A 0T6. Phone (613) 990-9607.

3) Subscriptions are available for Consumer Price Index series published monthly and quarterly for Canada and urban centres. For information on subscriptions, contact a Statistics Canada Regional Office or write to: Publications Sales & Services, Statistics Canada, Ottawa, Ontario K1A 0T6.

   The Consumer Price Index (Catalogue 62-001) monthly.
   Consumer Prices and Price Indexes (Catalogue 62-010) quarterly.

4) For additional information on Consumer Price Index methodology, order publication 62-553 The Consumer Price Index Reference Paper: Concepts and Procedures, Updating Based on 1978 Expenditures.

5) If you would like a written response to any questions, the nearest Regional Office or Prices Division in Ottawa would be pleased to provide you with a letter of clarification. They will also provide written documentation verifying the authenticity of information supplied. Lawyers have often utilized such documentation as evidence in litigation instead of calling Statistics Canada employees for signed affidavits or as witness.

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